

ABSTRACT

Reactor wall coatings for polymerization reactors and processes for forming such coatings are disclosed. The reactor wall coatings can have a thickness of at least 100 μm and a molecular weight distribution including a major peak having one or more of an M_w/M_n ratio of less than 10; an M_z/M_w ratio of less than 7; and a maximum value of $d(\text{wt\%})/d(\log \text{MW})$ at less than 25,000 daltons in a plot of $d(\text{wt\%})/d(\log \text{MW})$, where MW is the molecular weight in daltons. The reactor wall coatings can be formed in-situ during polymerization, on reactor walls initially free of a reactor wall coating, or having a pre-existing reactor wall coating.